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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,269	10/23/2003	Raymond Rui-Feng Liao	2003P10141US01	1537

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Siemens Corporation
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EXAMINER	
MERED, HABTE	

ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/692,269	LIAO ET AL.	
	Examiner	Art Unit	
	HABTE MERED	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 February 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18,20 and 21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18,20 and 21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The amendment filed on 2/07/2008 has been entered and fully considered.

2. Claims 1-18, 20, and 21 are pending. Claims 1, 20, and 21 are the base independent claim. Claim 19 has been cancelled and all independent claims have been amended.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. **Claims 1, 10, 12, 13, 15, 16, 18, 20, and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Rudnick et al (US Pub. No. 20020159418), in view of Spinar et al (US Pub. No. 2002/0080816), and Ho (US Pub. No. 2004/0196850).

Regarding **claim 1**, Rudnick'418 teaches a method for providing a delay guarantee **(Rudnick teaches providing QoS to WLANs – See Paragraphs 16 and 28)** for each of a plurality of client devices associated with an access point **(See Figure 1 has client devices 3...22 and the BSS as the access point as illustrated in paragraphs 23 and 24)**, comprising: classifying each of the plurality of client devices into one of a plurality of potential client device types **(See paragraphs 28, 29 and 30)**;

determining a desired traffic load for the plurality of client devices **(See Paragraphs 38, 40 and 41 and Tables 1 and 2)**.

Rudnick'418 fails to disclose an access point classifying each of the plurality of client devices into one of a plurality of potential client device types based on at least a measurement of current and previous traffic loads for each of the plurality of client devices.

However, the above mentioned claimed limitations are well known in the art as evidenced by Spinar'816. In particular, Spinar'816 discloses an access point **(Figure 1, 106)** classifying each of the plurality of client devices into one of a plurality of potential client device types based on at least a measurement of current and previous traffic loads **(See Figures 12 and 13 for different uplink/downlink BW allocation and in Figure 14 the different polling groups and paragraph 63, lines 20-25)** for each of the plurality of client devices **(See paragraphs 18, 42, 63 (lines 20-25), 76, 147-149, 151, 154, 155, 164 and see Figures 12b, 13, 14, and 15)**.

In view of the above, having the method of Rudnick'418 and then given the well established teaching of Spinar'816, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the method of Rudnick'418 as taught by Spinar'816, since Spinar'816 states in paragraph 13, the benefit for the access point to use such a categorization method is that it allows it to have an efficient bandwidth allocation methods which can accommodate an arbitrary large number of users having uplink bandwidth needs which vary frequently.

Rudnick'418 also fails to teach allocating shaper intervals to each of the plurality of client devices based on client device type classification and the desired traffic load, wherein the classifying, determining and allocating are performed by the access point and making a determination of whether the client device is critical.

However, the above mentioned claimed limitations are well known in the art as evidenced by Ho'850. In particular, Ho'850 discloses allocating shaper intervals to each of the plurality of client devices based on client device type classification and the desired traffic load **(Ho'850 discloses in Figure 1 a WLAN 10 with Access Point 17 and client devices STA 14 and STA 16 and is further illustrated in paragraph 24. Ho'850 in paragraphs 26 and 30 shows that the AP controls the scheduling and transmission of data in both the normal contention free period for isochronous streams and contention free period for asynchronous streams as well as contention period. Further in paragraph 31 Ho'850 shows the AP keeping a classification list of all streams, i.e. stations or client devices, classified as isochronous in Lists Ls1 and Ls2 and in paragraph 37 the AP keeping a classification list of all streams, i.e. stations or client devices, classified as asynchronous in Lists Lb. This is further illustrated in Figure 3.)**,

wherein the classifying, determining and allocating are performed by the access point **(See paragraphs 26 and 27)** and making a determination of whether the client device is critical **(The AP classifying a stream and directly or indirectly the station sourcing the stream as isochronous is literally the same as the Applicant's critical classification for client devices. Closely evaluating Applicant's disclosure**

in the published specification, in paragraph 48 it is suggested that any device admitted with a declared bandwidth in the WLAN is critical. In the specification in paragraph 57 it is suggested the client device is preconfigured as critical. Hence the specification fails to define what critical is. Critical compliant and critical non-compliant are defined on the basis of bandwidth utilization of critical devices without again defining accurately what makes a device critical. Similarly what makes a device non-critical is not defined and only the compliance component is defined in terms of bandwidth utilization. Hence, isochronous stream devices can be considered critical and Ho'850 in paragraphs 9-11 shows the bandwidth allotted varies from time to time in terms traffic load and rate as detailed in paragraph 11).

In view of the above, having the method of Rudnick'418 and then given the well established teaching of Ho'850, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the method of Rudnick'418 as taught by Ho'850, since Ho'850 states in paragraph 9 such a modification allows a method for scheduling contention-free access times for data transmissions in a WLAN according to selected Quality of Service (QoS) requirements such as data rates and delay bounds.

Regarding **claim 20**, Rudnick discloses an article of manufacture comprising: a computer readable medium having stored thereon instructions which, when executed by a processor, cause the processor **See Paragraphs 23 and 40)** to: classify each of the plurality of client devices into one of a plurality of potential client device types **(See**

paragraphs 28, 29 and 30); determining a desired traffic load for the plurality of client devices **(See Paragraphs 38, 40 and 41 and Tables 1 and 2)**.

Rudnick'418 fails to disclose an access point classifying each of the plurality of client devices into one of a plurality of potential client device types based on at least a measurement of current and previous traffic loads for each of the plurality of client devices.

However, the above mentioned claimed limitations are well known in the art as evidenced by Spinar'816. In particular, Spinar'816 discloses an access point **(Figure 1, 106)** classifying each of the plurality of client devices into one of a plurality of potential client device types based on at least a measurement of current and previous traffic loads **(See Figures 12 and 13 for different uplink/downlink BW allocation and in Figure 14 the different polling groups and paragraph 63, lines 20-25)** for each of the plurality of client devices **(See paragraphs 18, 42, 63 (lines 20-25), 76, 147-149, 151, 154, 155, 164 and see Figures 12b, 13, 14, and 15)**.

In view of the above, having the article of manufacture of Rudnick'418 and then given the well established teaching of Spinar'816, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the article of manufacture of Rudnick'418 as taught by Spinar'816, since Spinar'816 states in paragraph 13, the benefit for the access point to use such a categorization method is that it allows it to have an efficient bandwidth allocation methods which can accommodate an arbitrary large number of users having uplink bandwidth needs which vary frequently.

Rudnick'418 also fails to teach allocating shaper intervals to each of the plurality of client devices based on client device type classification and the desired traffic load, wherein the classifying, determining and allocating are performed by the access point and making a determination of whether the client device is critical.

However, the above mentioned claimed limitations are well known in the art as evidenced by Ho'850. In particular, Ho'850 discloses allocating shaper intervals to each of the plurality of client devices based on client device type classification and the desired traffic load **(Ho'850 discloses in Figure 1 a WLAN 10 with Access Point 17 and client devices STA 14 and STA 16 and is further illustrated in paragraph 24. Ho'850 in paragraphs 26 and 30 shows that the AP controls the scheduling and transmission of data in both the normal contention free period for isochronous streams and contention free period for asynchronous streams as well as contention period. Further in paragraph 31 Ho'850 shows the AP keeping a classification list of all streams, i.e. stations or client devices, classified as isochronous in Lists Ls1 and Ls2 and in paragraph 37 the AP keeping a classification list of all streams, i.e. stations or client devices, classified as asynchronous in Lists Lb. This is further illustrated in Figure 3.)**,

wherein the classifying, determining and allocating are performed by the access point **(See paragraphs 26 and 27)** and making a determination of whether the client device is critical **(The AP classifying a stream and directly or indirectly the station sourcing the stream as isochronous is literally the same as the Applicant's critical classification for client devices. Closely evaluating Applicant's disclosure**

in the published specification, in paragraph 48 it is suggested that any device admitted with a declared bandwidth in the WLAN is critical. In the specification in paragraph 57 it is suggested the client device is preconfigured as critical. Hence the specification fails to define what critical is. Critical compliant and critical non-compliant are defined on the basis of bandwidth utilization of critical devices without again defining accurately what makes a device critical. Similarly what makes a device non-critical is not defined and only the compliance component is defined in terms of bandwidth utilization. Hence, isochronous stream devices can be considered critical and Ho'850 in paragraphs 9-11 shows the bandwidth allotted varies from time to time in terms traffic load and rate as detailed in paragraph 11).

In view of the above, having the article of manufacture of Rudnick'418 and then given the well established teaching of Ho'850, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the article of manufacture of Rudnick'418 as taught by Ho'850, since Ho'850 states in paragraph 9 such a modification allows a method for scheduling contention-free access times for data transmissions in a WLAN according to selected Quality of Service (QoS) requirements such as data rates and delay bounds.

Regarding **claim 21,** Rudnick teaches an apparatus comprising a processor; a communication port coupled to the processor and adapted to communicate with at least one device **(See Figure 1, the BSS that acts as an AP has a processor called the central coordinator that processor is an Access Point and has a communication**

port to other stations See Paragraphs 23 and 40); and a storage device **(It is inherent for such a central coordinator to have some form of storage device to store protocol, program, scheduler logic etc…)** coupled to the processor and storing instructions adapted to be executed by the processor to: classify each of a plurality of client devices into one of a plurality of potential client device types **(See paragraphs 28, 29 and 30)**; determine a desired traffic load for the plurality of client devices **(See Paragraphs 38, 40 and 41 and Tables 1 and 2)**.

Rudnick'418 fails to disclose an access point classifying each of the plurality of client devices into one of a plurality of potential client device types based on at least a measurement of current and previous traffic loads for each of the plurality of client devices.

However, the above mentioned claimed limitations are well known in the art as evidenced by Spinar'816. In particular, Spinar'816 discloses an access point **(Figure 1, 106)** classifying each of the plurality of client devices into one of a plurality of potential client device types based on at least a measurement of current and previous traffic loads **(See Figures 12 and 13 for different uplink/downlink BW allocation and in Figure 14 the different polling groups and paragraph 63, lines 20-25)** for each of the plurality of client devices **(See paragraphs 18, 42, 63 (lines 20-25), 76, 147-149, 151, 154, 155, 164 and see Figures 12b, 13, 14, and 15)**.

In view of the above, having the apparatus of Rudnick'418 and then given the well established teaching of Spinar'816, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the apparatus of

Rudnick'418 as taught by Spinar'816, since Spinar'816 states in paragraph 13, the benefit for the access point to use such a categorization method is that it allows it to have an efficient bandwidth allocation methods which can accommodate an arbitrary large number of users having uplink bandwidth needs which vary frequently.

Rudnick'418 also fails to teach allocating shaper intervals to each of the plurality of client devices based on client device type classification and the desired traffic load, wherein the classifying, determining and allocating are performed by the access point and making a determination of whether the client device is critical.

However, the above mentioned claimed limitations are well known in the art as evidenced by Ho'850. In particular, Ho'850 discloses allocating shaper intervals to each of the plurality of client devices based on client device type classification and the desired traffic load **(Ho'850 discloses in Figure 1 a WLAN 10 with Access Point 17 and client devices STA 14 and STA 16 and is further illustrated in paragraph 24. Ho'850 in paragraphs 26 and 30 shows that the AP controls the scheduling and transmission of data in both the normal contention free period for isochronous streams and contention free period for asynchronous streams as well as contention period. Further in paragraph 31 Ho'850 shows the AP keeping a classification list of all streams, i.e. stations or client devices, classified as isochronous in Lists Ls1 and Ls2 and in paragraph 37 the AP keeping a classification list of all streams, i.e. stations or client devices, classified as asynchronous in Lists Lb. This is further illustrated in Figure 3.)**,

wherein the classifying, determining and allocating are performed by the access point **(See paragraphs 26 and 27)** and making a determination of whether the client device is critical **(The AP classifying a stream and directly or indirectly the station sourcing the stream as isochronous is literally the same as the Applicant's critical classification for client devices. Closely evaluating Applicant's disclosure in the published specification, in paragraph 48 it is suggested that any device admitted with a declared bandwidth in the WLAN is critical. In the specification in paragraph 57 it is suggested the client device is preconfigured as critical. Hence the specification fails to define what critical is. Critical compliant and critical non-compliant are defined on the basis of bandwidth utilization of critical devices without again defining accurately what makes a device critical. Similarly what makes a device non-critical is not defined and only the compliance component is defined in terms of bandwidth utilization. Hence, isochronous stream devices can be considered critical and Ho'850 in paragraphs 9-11 shows the bandwidth allotted varies from time to time in terms traffic load and rate as detailed in paragraph 11)**.

In view of the above, having the apparatus of Rudnick'418 and then given the well established teaching of Ho'850, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the apparatus of Rudnick'418 as taught by Ho'850, since Ho'850 states in paragraph 9 such a modification allows a method for scheduling contention-free access times for data

transmissions in a WLAN according to selected Quality of Service (QoS) requirements such as data rates and delay bounds.

Regarding **claim 10**, Rudnick'418 teaches a method, further comprising: allocating bandwidth to each of the plurality of client devices. **(See Tables 1 and 2)**

Regarding **claim 12,** the combination of Rudnick'418, Spinar'816, and Ho'850 teaches a method of further comprising determining a reference time for first client device in of the plurality of client devices based on a shaper interval associated with the first client device. **(See Spinar'816 Figures 12B and 14)**

Regarding **claim 13**, the combination of Rudnick'418, Spinar'816, and Ho'850 teaches a method, wherein the allocating shaper intervals to each of the plurality of client devices based on client device type classification and the desired traffic load includes allocating a shaper interval to a first client device in the plurality of client devices such that the first client device's interframe interval is larger than the shaper interval **(Ho'850 shows in figure 5 Tie larger than Tpp as opposed to what is shown in Figure 4 as chronicled in paragraphs 47 and 48).**

Regarding **claim 15**, the combination of Rudnick'418, Spinar'816, and Ho'850 teaches a method further comprising: receiving a request for new bandwidth. **(See Rudnick Paragraph 40 and 41 and Tables 1 and 2, and Spinar's Figure 13)**

Regarding **claim 16**, the combination of Rudnick'418, Spinar'816, and Ho'850 teaches a method, further comprising: determining bandwidth consumption for at least some of the plurality of client devices **(See Rudnick'418 Paragraph 40 and 41 and Tables 1 and 2 and Spinar's Figure 14).**

Regarding **claim 18**, the combination of Rudnick'418, Spinar'816, and Ho'850 teaches a method, wherein the access point **(See Rudnick's Figure 1 has client devices 3…22 and the BSS as the access point as illustrated in paragraph 24)** performs the classifying each of the plurality of client devices into one of a plurality of potential client device types **(See Rudnick's paragraphs 28, 29 and 30)**; the determining a desired traffic load for the plurality of client devices **(See Paragraphs 38, 40 and 41 and Tables 1 and 2)**; and the allocating shaper intervals to each of the plurality of client devices based on client device type classification and the desired traffic load **(Also from the discussion in Spinar'816's paragraphs 18, 42, 63 (lines 20-25), 76, 147-149, 151, 154, 155, 164 and see Figures 12b, 13, 14, and 15 it is clear that the limitation is addressed by Spinar'816).**

4. **Claims 2-5** are rejected under 35 U.S.C.103 (a) as being unpatentable over Rudnick'418 in view of Ho'850 and Spinar'816 as applied to claim 1 above, and further in view of Gu et al (Daqing Gu and Jinyun Zhang, "QoS Enhancements in IEEE802.11 Wireless Local Area network", IEEE, June 2003, Pages 120-124).

Regarding **claim 2**, the combination of Rudnick'418, Spinar'816, and Ho'850, fails to expressly teach a method wherein the client device types include critical compliant, critical non-compliant, non-critical satisfied, non-critical regulated, and non-critical non-responsive.

However, the above mentioned claimed limitations are well known in the art as evidenced by Gu. In particular, Gu discloses a method wherein the client device types

include critical compliant, critical non-compliant, non-critical satisfied, non-critical regulated, and non-critical non-responsive **(See Table 1, Page 122 – the 802.11 enhancement for QoS protocol defines 8 different level of priorities and the Applicant's priorities can be associated with any of the priorities in table 1 – in fact one also can argue that Spinar's Active, Recently Active, Pausing and inactive can be mapped into the categories shown in the limitation).**

In view of the above, having the method based on the combination of Rudnick'418, Spinar'816, and Ho'850 and then given the well established teaching of Gu, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the method based on the combination of Rudnick'418, Spinar'816, and Ho'850 as taught by Gu, the benefit of using various priorities resulting directly from the modification is to provide QoS in a manner compliant with the IEEE 802.11 enhancement for QoS protocol.

Regarding **claim 3**, the combination of Rudnick'418, Spinar'816, Ho'850 and Gu discloses a method wherein the allocating shaper intervals to each of the plurality of client devices based on client device type classification and the desired traffic load includes allocating a shaper interval of zero to a client device classified as critical compliant **(See also Gu Table 2 on page 123. Assigning zero is literally possible according to Gu's teachings which is based on the enhanced standard but has the drawback of depriving access to low priority devices.).**

Regarding **claim 4**, the combination of Rudnick'418, Spinar'816, Ho'850 and Gu discloses a method, wherein the allocating shaper intervals to each of the plurality of

client devices based on client device type classification and the desired traffic load includes allocating a shaper interval of zero to a client device classified as critical non-compliant if no traffic overload exists for the access point **(See also Gu Table 2 on page 123. Assigning zero is literally possible according to Gu's teachings which is based on the enhanced standard but has the drawback of depriving access to low priority devices.)**.

Regarding **claim 5**, the combination of Rudnick'418, Spinar'816, Ho'850 and Gu discloses a method, wherein the allocating shaper intervals to each of the plurality of client devices based on client device type classification and the desired traffic load includes allocating a non-zero shaper interval to a client device in the plurality of client devices classified as critical non-compliant when a traffic overload exists for the access point and the plurality of client devices includes at least one client device classified as critical compliant. **(See Gu Table 1 and Table 2 on pages 122-123.).**

5. **Claims 6 and 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Rudnick'418 in view of Spinar'816 and Ho'850 as applied to claim 1 above, and further in view of Awater et al (US 2007/0109980).

Regarding **claims 6**, the combination of Rudnick'418, Spinar'816, and Ho'850 fails to teach a method, further comprising: disassociating at least one of the plurality of client devices from the access point if a traffic overload exists for the access point.

However, the above mentioned claimed limitations are well known in the art as evidenced by Atwater'980. In particular, Atwater'980 discloses a method, further

comprising: disassociating at least one of the plurality of client devices from the access point if a traffic overload exists for the access point **(See Figure 4, step 50 and Figure 5, step 58).**

In view of the above, having the method based on the combination of Rudnick'418, Spinar'816, and Ho'850 and then given the well established teaching of Atwater'980, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the method based on the combination of Rudnick'418, Spinar'816, and Ho'850 as taught by Atwater'980, the benefit being to use load balancing is to improve roaming as detailed by Awater in paragraph 14.

Regarding **claim 17**, it is noted that the limitations of claim 17 corresponds to that of claim 6 as discussed above, please see the Examiner's comments with respect to claim 6 as set forth in the rejection above.

6. **Claims 7-9, 11, and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Rudnick'418 in view of Spinar'816 and Ho'850 as applied to claim 1 above, and further in view of Grilo et al, (Antonio Grilo, Mario Macedo, and Mario Nunes, "A Scheduling Algorithm For QoS Support in IEEE802.1E Networks", IEEE, June 2003, Pages 36-43).

Regarding **claim 7**, the combination of Rudnick'418, Spinar'816, and Ho'850 teaches wherein the determining a desired traffic load for the plurality of client devices, but fails to teach that the method includes determining a maxMeanAccessTime value associated with the plurality of client devices.

However, the above mentioned claimed limitations are well known in the art as evidenced by Grilo. In particular, Grilo discloses a method, wherein the determining a desired traffic load for the plurality of client devices includes determining a maxMeanAccessTime value associated with the plurality of client devices **(See Equation 2 on page 38)**.

In view of the above, having the method based on the combination of Rudnick'418, Spinar'816, and Ho'850 and then given the well established teaching of Grilo, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the method based on the combination of Rudnick'418, Spinar'816, and Ho'850 as taught by Grilo, the benefit for determining maxMeanAccessTime value associated with the plurality of client devices is to comply with IEEE 802.11 enhanced standards.

Regarding **claim 8**, the combination of Rudnick'418, Spinar'816, Ho'850, and Grilo teaches a method, wherein the determining a desired traffic load for the plurality of client devices includes determining an access delay time for a first of the plurality of client devices. **(See Grilo's last columns of Tables 3 and 4)**

Regarding **claim 9**, the combination of Rudnick'418, Spinar'816, Ho'850, and Grilo teaches a method, wherein determining a desired traffic load for said plurality of client devices includes determining a target Inter-Frame Space value associated with the plurality of client devices. **(See Grilo's Table 2)**

Regarding **claim 11**, the combination of Rudnick'418, Spinar'816, and Ho'850 teaches a method of allocating bandwidth to each of the plurality of client devices, but

fails to teach wherein the allocating bandwidth to each of the plurality of client devices includes determining a target frame rate and shaper interval for a first client device in the plurality of client devices based on a guarantee delay time associated with the first client device and a maxMeanAccess Delay value associated with the plurality of client devices.

However, the above mentioned claimed limitations are well known in the art as evidenced by Grilo. In particular, Grilo discloses a method wherein the allocating bandwidth to each of the plurality of client devices includes determining a target frame rate and shaper interval for a first client device **(See Tables 1 and 2)** in the plurality of client devices based on a guarantee delay time **(See Delay Bound time on page 38)** associated with the first client device and a maxMeanAccess Delay value **(See Equation 2 on page 38**) associated with the plurality of client devices.

In view of the above, having the method based on the combination of Rudnick'418, Spinar'816, and Ho'850 and then given the well established teaching of Grilo, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the method based on the combination of Rudnick'418, Spinar'816, and Ho'850 as taught by Grilo, the benefit for determining maxMeanAccessTime value associated with the plurality of client devices is to comply with IEEE 802.11 enhanced standards.

Regarding **claim 14**, it is noted that the limitations of claim 14 corresponds to that of claim 11 as discussed above, please see the Examiner's comments with respect to claim 11 as set forth in the rejection above.

Response to Arguments

7. Applicant's arguments with respect to all independent claims have been considered but are moot in view of the new ground(s) of rejection. Ho'850 teaches the newly added limitations in a very clear manner and it is combinable with the primary reference (Rudnick'418).

Examiner also wants to indicate that it is not clear how the independent claims at the minimum are distinguished from what is taught by IEEE 802.11D and E QoS parameters as chronicled in IEEE 802.11e/Draft D2.0 (11/2001) and any future amendments should be distinguishable from what is contained in IEEE 11/e Draft D2.0 QoS for HCF and EDCF.

Applicant attempted in the current amendment filed on 2/07/08 to distinguish the independent claims by adding limitation requiring the access point determining whether a device is critical. However as detailed in the rejection of the independent claims the category critical is not at all or adequately defined in the specification. Certainly the previous cited prior arts as well as Ho'850 teach the access point classifying streams and devices associated with streams on QoS basis and adequately meet the limitations in the independent claims. Atikom even though not used in this Office Action is still a very pertinent art and can be reintroduced if needed.

According to the Applicant, the basis of labeling devices critical was based on the specification's teachings found in paragraphs 46-57. Closely evaluating Applicant's disclosure in the published specification, in paragraph 48 it is suggested that any device

admitted with a declared bandwidth in the WLAN is critical. In the specification in paragraph 57 it is only suggested that the client device is preconfigured as critical. Hence the specification fails to define what critical is. Critical compliant and critical non-compliant are defined on the basis of bandwidth utilization of critical devices without again defining accurately what makes a device critical. Similarly what makes a device non-critical is not defined and only the compliance component is defined in terms of bandwidth utilization. Hence, isochronous stream devices can be considered critical and Ho'850 in paragraphs 9-11 shows the bandwidth allotted varies from time to time in terms traffic load and rate as detailed in paragraph 11. In fact, based on the broad definition provided by the specification for determining devices as “critical", all of the cited prior arts teach the limitation.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HABTE MERED whose telephone number is (571)272-6046. The examiner can normally be reached on Monday to Friday 9:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Aung S. Moe can be reached on 571 272 7314. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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